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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/930,710 | 08/16/2001 | Yasufumi Uchida | OHG 125 | 1660 |

23995 7590 09/02/2003

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EXAMINER

CRUZ, LOURDES C

ART UNIT

PAPER NUMBER

2827

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|---------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/930,710 | UCHIDA ET AL. | |
| | Examiner | Art Unit | |
| | Lourdes C. Cruz | 2827 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 21-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 1-7 and 21-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, and 21-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Lin et al. (US 6359340).

Lin et al. discloses (see cover figure):

A rearrangement sheet comprising an insulating sheet (col. 6, lines 3+), said insulating sheet having an element mounting region (where 510,520,540 are disposed) defined thereon; and a plurality of conductive metallic patterns (560) formed on the insulating sheet so as to surround, and not extend into, the element mounting region, each of said conductive metallic patterns extending continuously, and in a straight line.

Lin et al. also discloses:

(Claim 2): The rearrangement sheet according to claim 1, wherein said conductive metallic patterns comprise electrodes (see electrodes connected to

512) for wire bonding with external electrodes (see that the device is not intended to be used alone, but in combination/connected/bonded to a system, therefore external electrodes are inherent).

(Claim 3): The rearrangement sheet according to claim 1, wherein said conductive metallic patterns are metallic wiring patterns.

(Claim 4): The rearrangement sheet according to claim 1, wherein said conductive metallic patterns are conductive metal plated patterns.

(Claim 5): The rearrangement sheet according to claim 4, wherein said conductive metallic patterns comprise a laminated pattern of an underlying plated pattern formed on an upper surface of the insulating sheet and a conductive metal plated pattern formed on this underlying plated pattern (see figure 13, 570a shows a buried pattern that has an underlying side and an exposed side over the underlying side).

(Claim 6): The rearrangement sheet according to claim 1, wherein an insulating adhesive sheet is provided in the element-mounting region (Col. 4, lines 15+).

(Claim 7): The rearrangement sheet according to claim 1, wherein said insulating sheet is an insulating adhesive sheet (Col. 6, lines 5-11).

(Claim 21): The rearrangement sheet according to claim 1, wherein said conductive metallic patterns are disposed directly on a surface of said insulating sheet (see nothing is interposed between sheet and metallic pattern).

(Claim 22): The rearrangement sheet according to claim 1, wherein each of said conductive metallic patterns extends levelly from an edge of said insulating sheet to the element mounting region.

(Claim 23): The rearrangement sheet according to claim 1, wherein the conductive metallic patterns are disposed at a north, south, east and west side of the element mounting region.

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter: Claims 8-15 are allowed for reciting a rearrangement sheet on the upper surface of the semiconductor element other than a region wherein bonding pads are present, in combination with all the other structural features specifically recited in the claims, as indicated in a previous Office action.

Response to Arguments

Applicant's arguments filed after the final rejection of 01/24/2003 with respect to the claims have been considered but are moot in view of the new grounds of rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elle Cruz whose telephone number is 703-306-5691. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on 703-305-9883. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

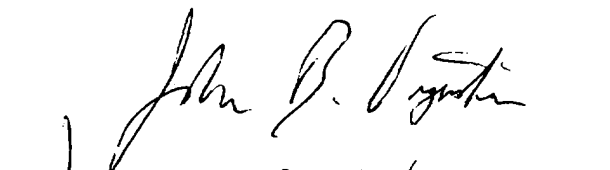
Art Unit: 2827

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Elle Cruz

Lourdes C. Cruz
Examiner
Art Unit 2827



John B. Vigushin
Primary Examiner
AU 2827